

Managing Requirements

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a passion for discovery



What do we need to manage?

562 Contract Requirements

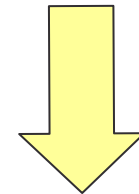
(as of August 2008)



Develop & integrate
information into the
way we work

29 Management Systems
147 Subject Areas

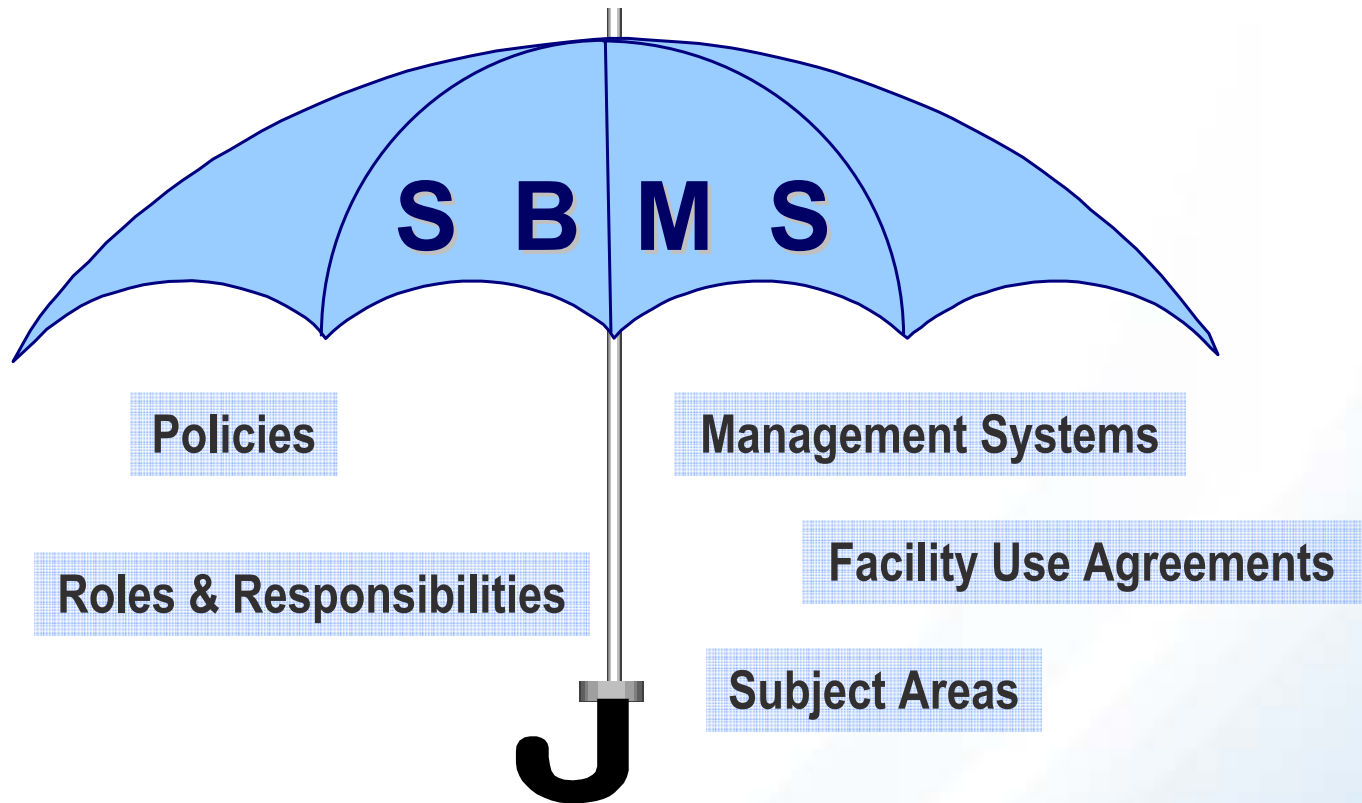
ANSI	3
BNL Internal Rqmts	2
CFRs	81
Contract Clauses	211
DOE Directives	115
EPA	2
Executive Orders	5
Federal Laws/Regulations	61
MOA	4
MOU	3
Miscellaneous	9
National Consensus Stds.	27
NYS	37
Suffolk County	2



Work is
performed

Deliver to the Lab
community
the way work is to be
performed (via web - SBMS)

SBMS Construct



Roles

- MS Stewards - develop, operate, and maintain MSs that fully support the mission of the institution
- MS Points of Contact - support the Stewards in their role
- Subject Matter Experts - individuals with extensive, in-depth knowledge of a particular subject

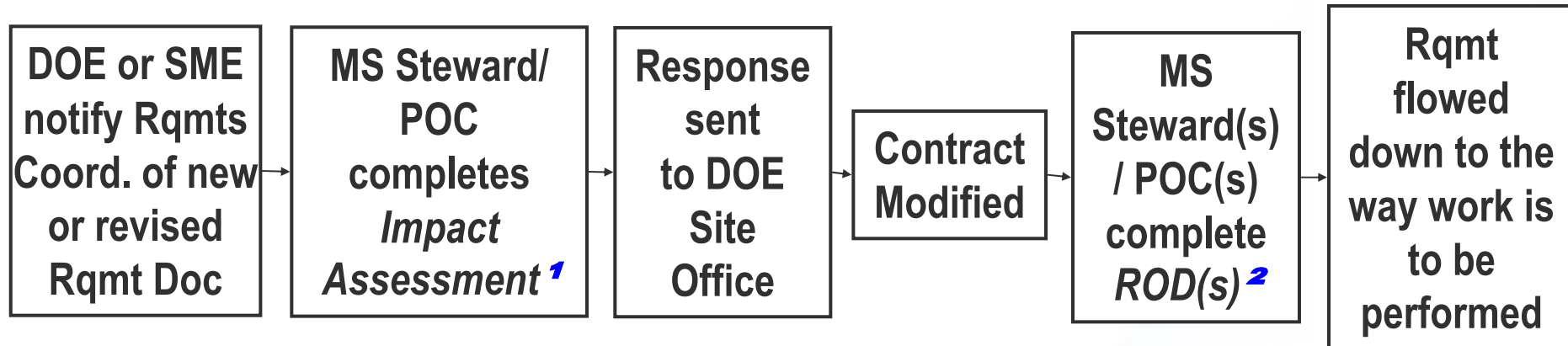
Requirements Review

- Previously – manual paper-based system with Access database as log
 - Used only by Requirements Coordinator
 - Not accessible by, or integrated into, the wider lab community
- 2005 Assessment – independent “management self-assessment” of requirements process as part of ISM review
- Project Plan – 3 major initiatives
 - Develop & Launch Electronic Requirements Tools
 - Verification of Requirements
 - Contract Mapping

Managing Requirements

- A process that supports the identification & management of requirements that apply to the institution (in part or in its entirety).
- October 2006 - launched electronic Requirements Tools to provide a more effective & efficient way of managing the process & associated documentation.
- Tools have streamlined the process & provided several benefits.

Modified Requirements Management Process



¹***Impact Assessment*** ^(new) - The documentation showing the overall assessment of the requirement, and its impact on the Laboratory.

²***Record of Decision (ROD)*** - The documentation that illustrates how the requirement is being satisfied by the Laboratory.

Impact Assessment & Record of Decision (ROD) Details

■ Impact Assessment Questions:


- Does the Requirement Doc apply to BNL? If not, please provide explanation.
- If the Requirement Doc does apply, is BNL currently in compliance?
- If BNL is not currently in compliance, what is the estimated time to become compliant and what are the impacts (e.g. projected cost of implementation, additional staff, training, procedures, equipment)?
- Do you recommend that BNL accept the Requirement Doc? If not, please provide justification.
- What are the risks if we do not accept the Requirement?
- Was Legal involved in the review of the Requirement Doc?

■ ROD Sections:

- Does BNL currently have systems to address the requirement?
- How is requirement satisfied/implemented?
- Identify any necessary implementation actions.
- Who analyzed the requirement?

The Electronic Tools

Standards-Based Management System (SBMS)



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SBMS Tools

Developing/Revising Documents

Managing Requirements

Data Management Tools

Product Development Tools

SBMS Information

BNL Policies

Facility Use Agreements

Lessons Learned

Management Systems

Program Descriptions

SBMS Document Hierarchy

Standards of Performance

Laboratory-Wide Information

Assessment Tracking System

BNL Home

Requirements Management Tools: Current Work Scope

Current Work Scope Requirement/ROD Management Verification Reports Variances

0 Impact Assessment(s) to be Completed [View/Hide Impact Assessment Tasks](#)

Instructions: Click on the "Provide Comment" link in the action column to complete the Impact Assessment.

0 New ROD(s) Awaiting Your Input [View/Hide ROD\(s\)](#)

Note: Only RODs that require action are listed, Approved RODs are not listed.
Instructions: Click on the "Parsed Unit Description" to provide input for the ROD.


0 Requirement(s) With ROD Revision(s) Awaiting Your Approval. [View/Hide Requirement\(s\) with ROD Revision\(s\)](#)

Instructions: Click on the "Requirement/Document Number" link to approve revised RODs.

0 Actions(s) to be Completed [View/Hide ROD Actions](#)

Note:* Only the Management System Steward and/or POC may edit/close ROD Action Items, an asterisk in the Edit column indicates that you are not permitted to edit/close the associated entry.

Brookhaven Science Associates



Some Benefits of Tools

- Clear traceability of requirements
- Electronic workflow
 - Impact Assessment
 - Articulate institutional impact of pending requirements
 - Formally document justification for not accepting a requirement
 - RODs
 - Created & approved electronically
 - Email requests & notifications
 - Implementation Actions
 - Reminders for action owners
 - Summary status for Management System Stewards

Some Benefits

- Increases visibility of requirements information
 - Accessibility from MS Descriptions
 - Drivers/Requirements visible in Laboratory-wide procedures (subject areas)
 - Reports
- Provides access to requirements information
 - Check status of a requirement
 - Initiate a revision to a ROD (keep current)
 - View/Edit implementation actions
- Streamlined the Requirements Process by eliminating the use of multiple systems
 - System for correspondence with DOE Site Office
 - Database to log requirements
 - Implementation action tracking

Areas for Improvement

- Requirement documentation is only as good as the information provided
- User feedback has identified areas where usability can be improved (currently working on improvements)
 - Action fields on ROD
 - Action emails:
 - Owner notification of action assignment
 - Action update & closure emails
 - Requirement status more clear/descriptive

Conclusion

- An electronic, systematic approach allows for complete and thorough traceability of requirements
 - “as painless as requirements management can be”